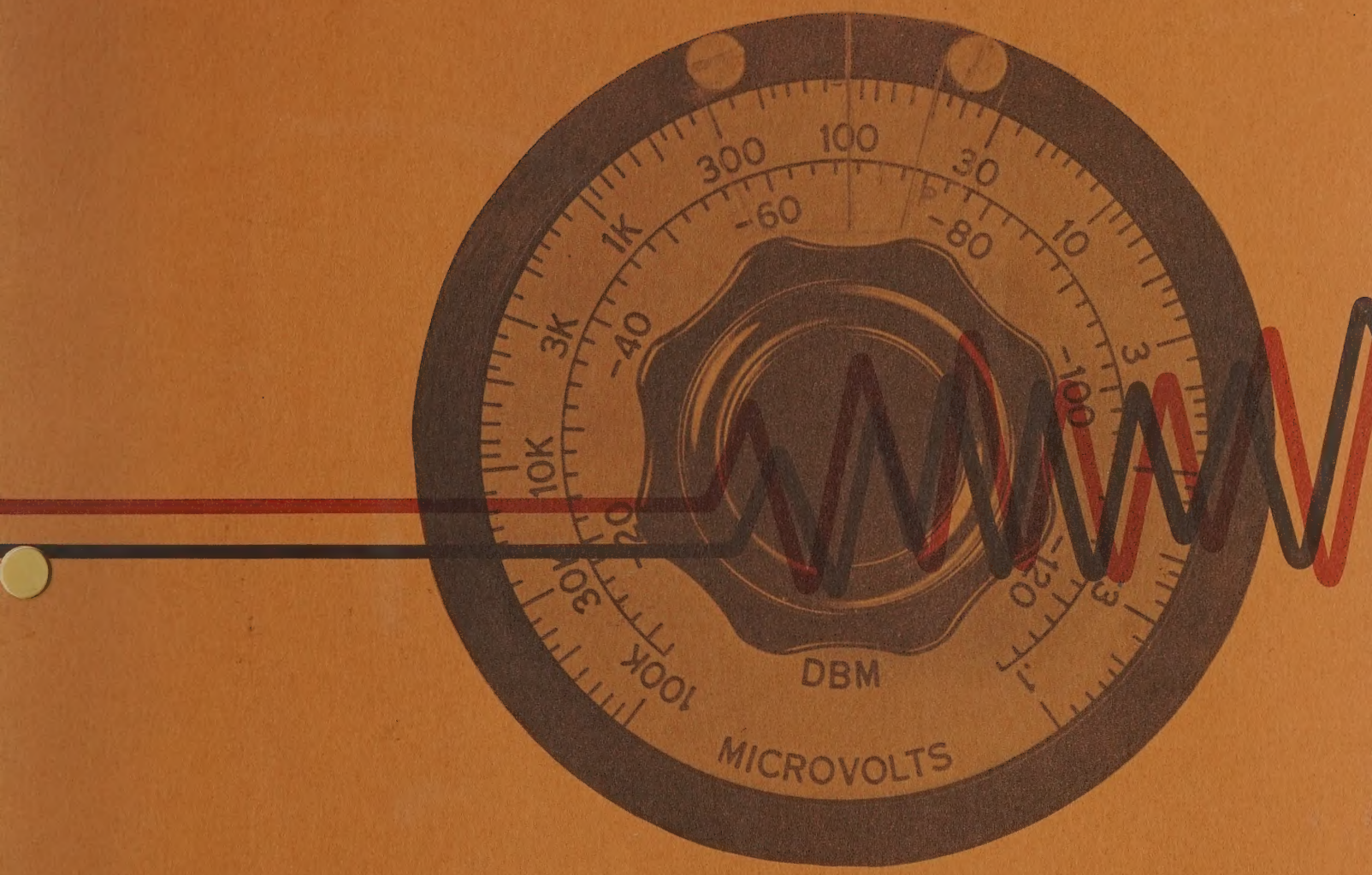
MOTOROLA INC., COMMUNICATIONS DIVISION • INSTRUCTION MANUAL

Rev to 1502



MOTOROLA Test Equipment

FM SIGNAL GENERATOR

MODEL T1034B

PRINTED IN U.S.A.

68P81004A55-O

MOTOROLA

FM SIGNAL GENERATOR*

MODEL T1034B

MC5575

1. DESCRIPTION

The Model T1034B is an FM signal generator utilizing a variable capacitance diode as a frequency modulator.

The signal generator essentially consists of a built-in power supply, a double shielded oscillator, a control for selection of six separate frequency bands, an output meter and external connection used to interconnect the signal generator to the associated equipment.

The unit incorporates a temperature-compensated barretter type bridge for continuous monitoring of the output voltage. The barretter is a highly reliable and very accurate standard for the measurement of r-f voltage. It incorporates long-term stability and is unaffected by errors due to temperature changes. The barretter provides a true rms response which insures a high degree of absolute voltage accuracy.

Accurate incremental voltage is provided by the mutual-inductance wave-guide below-cutoff attenuator. The physical dimensions, which determine the accuracy of the attenuator, are maintained within close tolerance limits.

The frequency bands are designed with a tuning ratio less than 1.32 to 1, i.e., for example in the lowest band the higher frequency, 32 mc is 1.28 times the value of the lower frequency, 25 mc. The small tuning ratio provides two features:

(1) An increase in the band spread which provides ease in tuning.

(2) Microphonics are reduced to a minimum due to the use of a variable capacitor with heavy rotor plates and wide spacing.

In the highest band, 890 to 960 mc, the oscillator is tuned from 445 to 480 mc, however, the output frequency is actually calibrated in terms of the second harmonic output of the oscillator.

The barretter bridge circuit maintains the fundamental frequency at a constant output, thereby providing a constant second harmonic output.

A SECOND HARMONIC OUTPUT CALIBRATION CHART for the 890 to 960 mc band is plotted for each separate signal generator. A reading on the curve indicates the magnitude of

* The Model T1034B Signal Generator is manufactured for Motorola Inc., Communications and Industrial Electronics Division, by the Measurements Corporation, Boonton, New Jersey.

MOTOROLA INC. COMMUNICATIONS DIVISION
Engineering Publications 4501 W. Augusta Blvd. Chicago 51, Illinois

GUARANTEED PERFORMANCE SPECIFICATIONS

FREQUENCY RANGE	Six bands as follows: R-F Oscillator 25 mc to 32 mc 32 mc to 41 mc 41 mc to 54 mc 132 mc to 175 mc 400 mc to 470 mc 890 mc to 960 mc Four bands as follows: I-F Oscillator 2.9 mc to 4.2 mc 4.1 mc to 6.0 mc 6.8 mc to 9.4 mc 69.0 mc to 76.0 mc
FREQUENCY ACCURACY	Each range is individually calibrated to an accuracy of ±0.5%.
OUTPUT VOLTAGE RF OSCILLATOR	Continuously variable from 0.1 microvolt to 100,000 microvolts; also calibrated from 128 dbm to -8 dbm 890-960 mc band - the maximum output will vary from approx. 2000 microvolts as indicated on the chart supplied with each instrument.
OUTPUT VOLTAGE I-F OSCILLATOR	The maximum output voltage available is better than 0.5 volt into a 50 ohm resistive load. This may be attenuated at least 50 to 1 by a potentiometer on the front panel within the gain control.
MICROVOLT REFERENCE LEVEL	Accurate to ±10% from 25 mc to 175 mc; ±20% from 400 mc to 470 mc
POWER SUPPLY	117 v a-c, 50-60 cps, 70 watts power consumption using a 1 ampere slow blow type fuse.
TUBE COMPLEMENT	6AF4A 5651 6TF4 12AT7 6X4 6J6 12BH7A 6AQ5A
PAD	2:1 voltage ratio (6 db) 50 ohm uhf termination
DIMENSIONS	11-1/2" high x 15-1/8" wide x 10-3/4" deep
WEIGHT	30 lbs.
SHIELDING	Double shielding is used on the oscillator to reduce stray radiation to a low value. Multi-section individually-shielded r-f filters are used on all circuits going to the oscillator. Carrier leakage is negligible.
RESIDUAL MODULATION	Residual FM modulation is less than 100 cycles at 460 mc.
DEVIATION	The deviation is indicated directly on the panel meter. Deviation Correction Curves are used to set the desired deviation for bands E and F. The deviation accuracy is ±10% for frequency bands A, B, C, and D. Means are provided for incremental change in carrier frequency to facilitate discriminator alignment. This is accomplished by varying the d-c potential applied to the variable capacitance diode. The frequency shift, in kilocycles, is indicated by the panel meter. The same correction curves used for the deviation must be used for the incremental settings on bands E and F.

the absolute level of the second harmonic which is approximately 5% of the fundamental in a typical case. The relative attenuator calibration is not affected by harmonic operation. The calibration chart is part of this instruction manual, however it is included as a loose-leaf insert.

A regulated and filtered power supply is used for the oscillator plate and heater voltages to provide frequency stability and to reduce to a minimum the residual FM due to power frequency hum.

2. STANDARD ACCESSORIES

Standard accessory items included with the T1034B Signal Generator are as follows:

a. Model 80-ZH1 Pad

The type 80-ZH1 Pad is a 2:1 voltage ratio (6 db), 50 ohms, T pad equipped with a type N male connector at the input and uhf female connector at the output. The pad is shown on Schematic Diagram 63D81004A56-O. Use of the pad is described in the OPERATING INSTRUCTIONS of this manual.

b. Model H-6080 Cable

The Model H-6080 is a four foot length of RG-55/U cable with uhf connectors at each end. The cable is used in conjunction with the 80-ZH1 Pad to provide an r-f connection to the associated equipment.

3. OPERATING INSTRUCTIONS

a. Controls

(1) Power ON-OFF Switch

The ON-OFF switch is mounted on the front panel. The switch controls the application of line voltage to the primary of the power transformer.

(2) Tuning Dial

The vernier tuning dial is located on the left side of the front panel. The knob is used to set the fundamental frequency, which is located under the fiducial line in the panel opening directly above. The vernier frequency dial is geared to the main dial. The vernier dial may be set to the zero point merely by pushing downward on the dial, to release it from the main dial, and rotating it to the zero point.

(3) Band Switching

The bar knob directly above the tuning dial controls the frequency band switching. When switching bands, rock the knob slightly from side to side so that the range change mechanism is in the proper position. The frequency bands are marked A, B, C, D, E, and F.

b. External Connections

(1) EXT. MOD.

The EXT. MOD. binding posts on the left side of the panel permit the application of an external signal for frequency modulation of the carrier. Approximately 1 kc FM deviation is produced per 1.0 volt peak of modulation of signal applied. A signal of 16 volts peak is sufficient to produce 16 kc deviation. The deviation is indicated on the panel meter.

(2) Output Control

The output control is a dual control consisting of a fiducial ring and a dial. The control, calibrated in microvolts and dbm, is used to drive the piston attenuator.

The ring fiducial is used to set the output reference level of 100,000 microvolts. The ring is rotated clockwise or counterclockwise until the pointer of the OUTPUT meter is directly over the vertical reference line. Under these conditions, the output dial will indicate the true output in microvolts; also when the RF OUTPUT is terminated in a 50 ohm load, the output can be read in dbm. If a 50 ohm 6 db pad properly terminated in 50 ohms, is connected to the RF OUTPUT jack, the output level is read directly beneath the pad line (labeled with a P) on the plastic fiducial.

(3) MOD. Switch

The MOD. Switch is located to the upper left of the meter. Its purpose is to select the type of modulation desired.

(a) The EXT. position allows external modulation to be applied to the oscillator via the two binding posts EXT. MOD. located at the extreme lower left corner of the front panel. The deviation is indicated on the panel meter.

(b) The CW position provides an unmodulated continuous wave carrier. In this position the panel meter is connected to the barretter bridge for r-f voltage level setting.

(c) The 1000-cycle position applies approximately 12 volts rms to the modulator input for internal modulation.

(d) The INCR position provides incremental adjustment of carrier frequency.

(4) DEV. Control

The DEV. Control is a potentiometer which controls incremental frequency shift, or frequency deviation, when either internal or external modulation is employed. The frequency deviation, or incremental frequency shift, is indicated on the panel meter.

(5) OUTPUT - KC DEVIATION Meter

When the BAND switch is in the CW position, the meter is connected to the barretter bridge to monitor the r-f output level. When the BAND switch is in the EXT. or the 1000 position, the meter is disconnected from the barretter bridge and is used to monitor the modulating signal voltage to indicate the frequency deviation in kilocycles. In this case the meter is connected to a crystal diode rectifier in order to operate as an a-c voltmeter. When the BAND switch is in the INCR position, the meter indicates incremental shift in carrier frequency.

(6) I-F Range

The i-f range is selected by this switch which is also on the ON-OFF switch for the i-f oscillator.

(7) I-F Tuning

This control is to the right of the i-f range switch. The frequency is marked in megacycles on a line with the number indicating the i-f range.

(8) I-F Gain

This control is concentric with the i-f range switch. It provides an uncalibrated attenuation of the i-f output.

c. Operation

(1) Connect the power cord to a 117 volts, a-c, power source. Place the switch in the upward ON position and allow one minute for the tubes to warm up.

(2) Rotate the bar knob to switch the desired frequency band in position. Rock the knob slightly from side to side to position the mechanism.

(3) Set the tuning knob to the desired carrier frequency.

(4) Rotate the fiducial ring until the OUTPUT meter pointer rests on the set line on the left hand portion of the meter scale.

(5) Turn the MICROVOLTS dial to the desired output voltage as indicated under the fiducial line on the plastic fiducial. To assure good frequency stability allow at least a half hour warm-up time.

(6) To frequency modulate the carrier using the internal 1000 cycle modulation, set BAND switch to frequency band in use. Set the MOD. switch to 1000. Rotate the DEV. control to desired KC DEVIATION as indicated on the meter.

NOTE

If Modulation Band switch does not correspond with the r-f frequency band in use, the meter readings will be incorrect.

(7) To frequency modulate the carrier using external modulation, connect the modulating signal to the EXT. MOD. binding posts. (This signal should be approximately 16 volts peak to produce the full deviation.) Set the MOD. switch to EXT. Set BAND switch. Rotate the DEV. control to desired KC DEVIATION as indicated on the meter. For frequency bands, A, B, C and D, the KC DEVIATION is indicated on the panel meter to an accuracy of ±10%.

NOTE

For frequency bands E and F use the DEVIATION CORRECTION CURVES to obtain the true deviation. These same curves must be used for the incremental settings.

(8) If incremental control of carrier frequency is desired, set MOD. switch to INCR and BAND switch to frequency band in use. The DEV. control adjusts the frequency shift.

(9) To operate the oscillator, the I-F range switch is turned to the number corresponding to the desired band. The desired frequency is then

selected on the dial to its right. Output is obtained at the BNC Connector marked I-F. For correct operation, this must be terminated in 50 ohms. The i-f output will then be linear with the setting of the I-F GAIN control. When the i-f oscillator is not in use, the I-F range switch should be in the OFF position. The i-f frequencies not covered by the fundamental bands, can be readily obtained by the use of harmonics.

EXAMPLE

12 mc would be obtained from the 2nd harmonic of the six megacycle frequency band.

4. CARRYING AND STORAGE INFORMATION

When the signal generator is to be carried or stored, the following procedures should be followed:

a. Turn the instrument face upward by placing it on its back.

b. Leave the pad and output cable connected to the RF OUTPUT connector on the front panel.

c. Loop the output cable into a one and one-half turn coil and plug the center pin of the uhf connector into the banana plug hole in the EXT. MOD. GND, binding post.

d. Loop the power cord into a coil and place it on the panel preferably with the plug toward the lower edge of the panel.

e. Place the cover on the case. Engage and snap both catches.

5. MAINTENANCE AND REPAIR

The maintenance and repairs to the instrument which may be required are classed into two categories. These are as follows: (1) simple repairs, such as the replacement of a common resistor or bypass condenser, and (2) repairs which would affect the calibration of the instrument.

a. Simple Repairs

The only components which may be replaced by the user or at an authorized Motorola Service Station are those physically located outside of the oscillator shield. (Replacement of the 6AF4A oscillator tube is usually accompanied by a change in frequency and output voltage which requires re-calibration at the factory.) Furthermore any components associated with the deviation calibration circuit should not be replaced by field personnel. The field replaceable items are assigned a standard Motorola part number as indicated on the parts list in back of the schematic diagram. The manufacturers part number is also listed with the Motorola part number for these replaceable items to assist in purchasing when required in an emergency, or to otherwise avoid delay due to mailing and handling.

Component parts referenced with an asterisk are not field replaceable items.

b. Major Repairs

Major repairs include repair or replacement of components which may affect the calibration of the instrument. All components included in the major repair category are indicated by a code symbol or an asterisk on the parts list in back of the schematic diagram.

If a major repair or re-calibration is required, the apparent malfunction should be noted and attached to the instrument. The instrument should then be carefully packed in a sturdy shipping carton and forwarded to:

Measurements Corporation
Boonton, New Jersey
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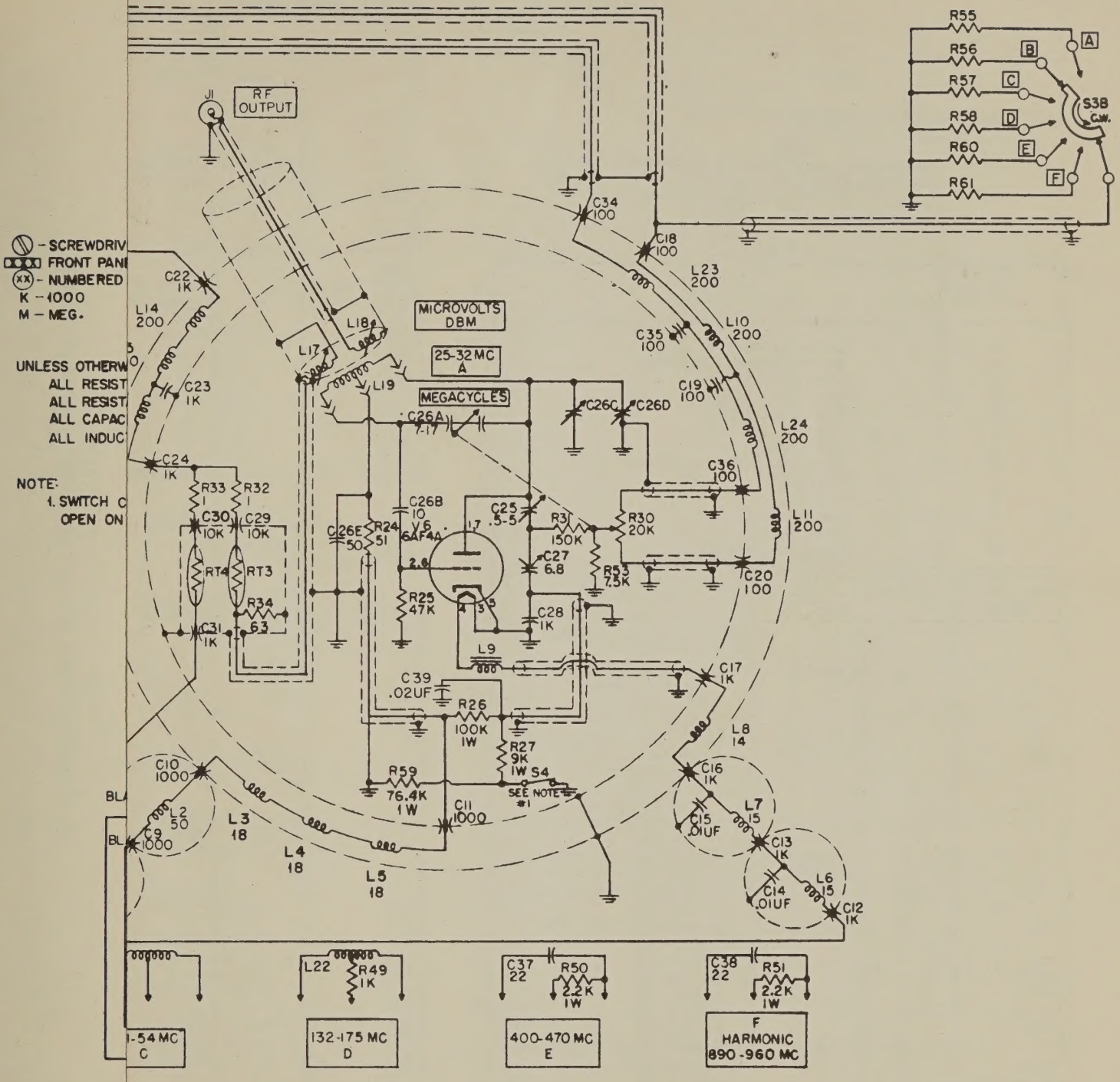
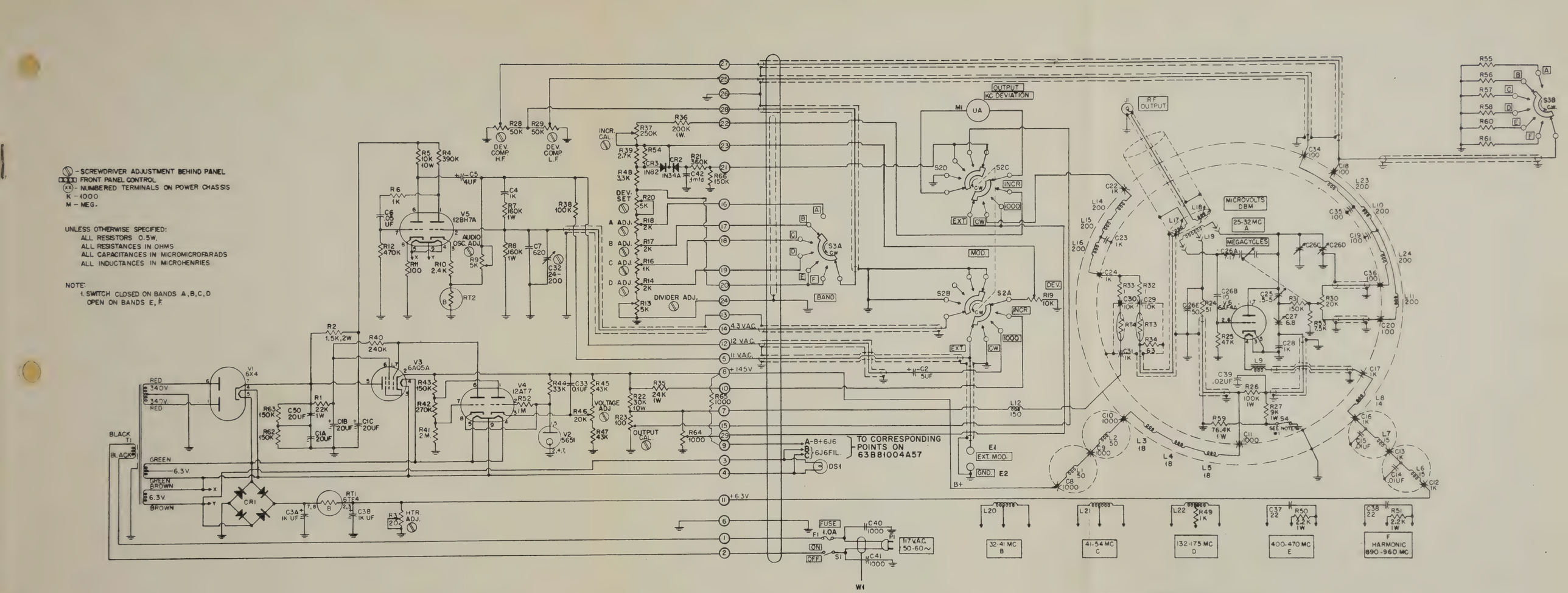


MODEL TABLE	
MODEL	DESCRIPTION
T-1034B	FM SIGNAL GENERATOR

DIAGRAM NO. 63D81004A56

Model T1034B FM Signal Generator
RF Osc, Audio & Power Supply
Schematic Diagram
Motorola No. 63D81004A56-O
7/5/61-UM



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Model T1034B FM Signal Generator
RF Osc, Audio & Power Supply
Schematic Diagram
Motorola No. 63D81004A56-O
7/5/61-UM

REFERENCE SYMBOL	LEGEND	MFG. PART NO.	DESCRIPTION
			RESISTOR, thermal:
RT1	A	65K868408	ballast lamp; type 6TF4
RT2	A	65K868409	ballast lamp; type 3S6 .
*RT3	B		
*RT4	B		
			SWITCH:
S1	A	40K857043	toggle; spst
*S2	B	H-6716	rotary; modulation
*S3	B		assembly; includes R19
*S4	B		toggle; type spst
			TRANSFORMER;
T1	A	25K868410	power;
			TUBE, electron:
V1	A	195T105A03	type 6X4
V2	A	195T192A01	type 5651
V3	A	195T101A03	type 6AQ5A
V4	A	195T113A02	type 12AT7
V5	A	195T274A01	type 12BH7A
V6	A	195T142A02	type 6AF4A
			CABLE; special purpose:
W1	A	30K857046	AC power; 2 conductor; includes P1

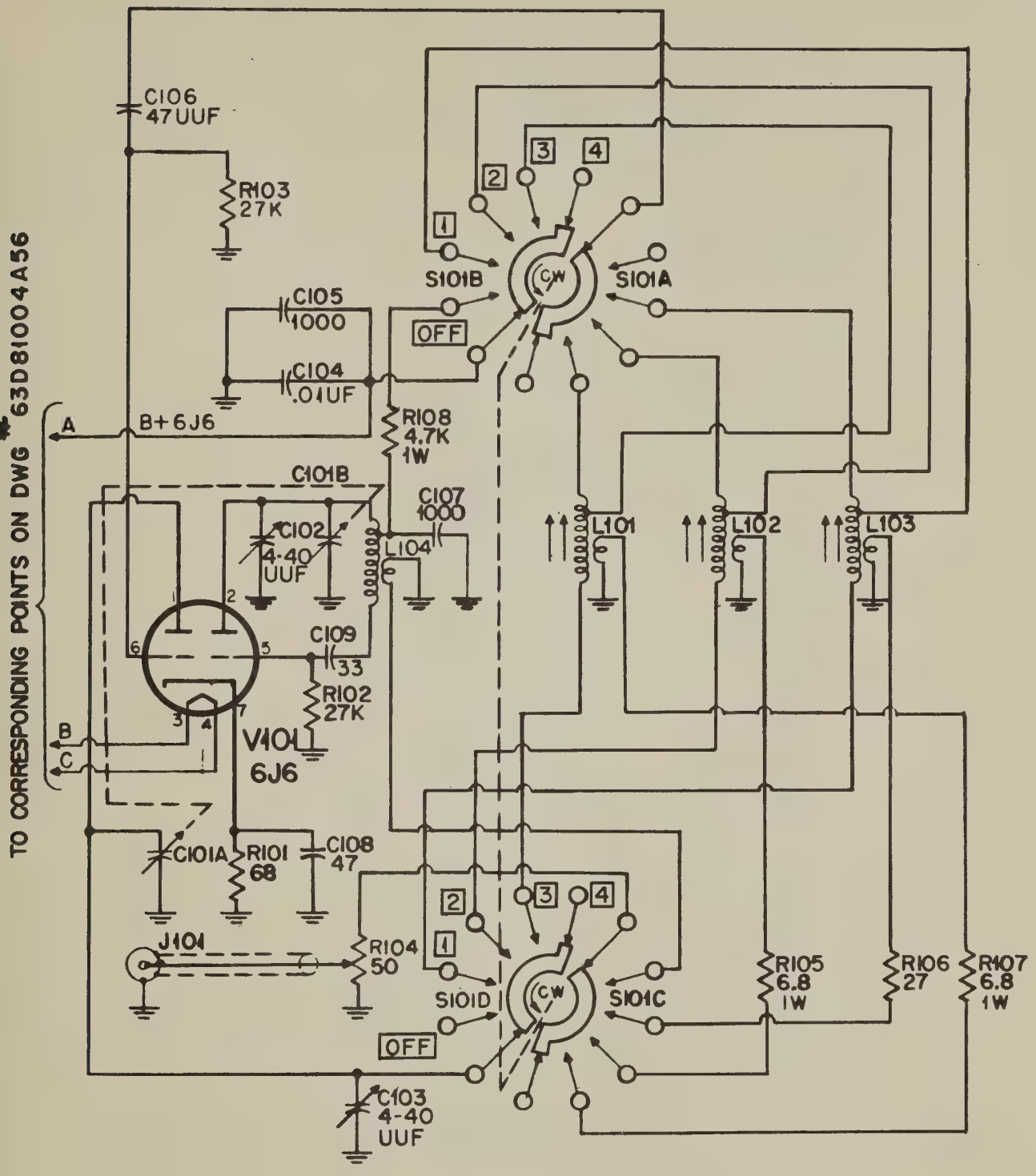


DIAGRAM NO. 63B81004A57

Model T1034B FM Signal Generator
IF Oscillator
Schematic Diagram
Motorola No. 63B81004A57-O
7/5/61-UM

PARTS LIST For Schematic Diagram 63D81004A56-O

NOTE

Referenced items indicated by an asterisk (*) are not field replaceable. The equipment must be returned to Measurements Corporation for replacement of these items.

LEGEND

LEGEND SYMBOL	MANUFACTURER
A	Motorola, Inc.
B	Measurements Corporation
C	Cornell Dubilier
D	Centralab
E	Radio Material Co.
F	Sprague
G	Erie Resistor Co.
H	International Rectifier Co.
J	Aerovox
K	Wirt
L	Continental Carbon
M	Allen-Bradley
N	International Resistance Co.

REFERENCE SYMBOL	LEGEND	MFG. PART NO.	DESCRIPTION
			CAPACITOR, fixed: unless otherwise stated
C1	A	23K868389	electrolytic; 3 section; c/o:
C1A			20 uf; 450 vdcw
C1B			20 uf; 450 vdcw
C1C			20 uf; 450 vdcw
C2	A	23K868390	electrolytic; 5 uf; 6 vdcw
C3	A	23K857033	electrolytic; 2 section; consisting of:
C3A			1000 uf; 15 vdcw
C3B			1000 uf; 15 vdcw
C4	A	21K847601	mica; silver; 1000 uuf ±5%; 500 vdcw
C5	A	23K868391	electrolytic; 4 uf; 450 vdcw
C6	A	8K868392	paper; .05 uf; 400 vdcw
C7	A	21D82537B05	mica; silver; 620 uuf ±5%; 500 vdcw
*C8	D	DA902-000	ceramic; 1000 uuf ±20%; 500 vdcw
*C9			same as C8
*C10			same as C8
*C11			same as C8
*C12			same as C8
*C13			same as C8
*C14	E	Type B	ceramic; .01 uf GMV; 600 vdcw
*C15			same as C14
*C16			same as C8
*C17			same as C8
*C18	D	DA902-000	ceramic; 100 uuf ±20%; 500 vdcw
*C19	F	507C20A	ceramic; 100 uuf
*C20			same as C18
C21			NOT USED
*C22			same as C8
*C23	F	507C2	ceramic; 1000 uuf
*C24			same as C8
*C25	G	532A	variable; 0.5-5 uuf
*C26	B	H-6539	variable; consists of C26A thru C26E
*C27	H	6.8SC20	variable semi; 6.8 uuf ±20%; 10 vdcw
*C28			same as C23
*C29	B	H-6162	CAPACITOR, (Cont'd) capacitor assy; .01 uf; includes R32
*C30			same as C29 except including R33
*C31	B	H-6160	capacitor assy; 1000 uuf
C32	A	19K868393	variable; 24-200 uuf
C33	A	8K801190	paper; .1 uf; 400 vdcw
*C34			same as C18
*C35			same as C19
*C36			same as C18
*C37	J	CN-1	ceramic; 22 uuf ±5%; N030
*C38			same as C37
C39	A	21B401029	.02 uf -20+80%; 500 vdcw
C40	A	21K868395	ceramic; 1000 uuf; GMV
C41			same as C40
*C42	C	PJ4P1	.1 uf; 400 vdcw
C43			NOT USED
C44			NOT USED
C45			NOT USED
C46			NOT USED
C47			NOT USED
C48			NOT USED
C49			NOT USED
C50	A	23K868396	electrolytic; 20 uf; 250 vdcw
			CRYSTAL UNIT:
CR1	A	48K857034	rectifier; selenium
*CR2			diode; type 1N34A
*CR3			diode; type 1N72 or 1N82
			LAMP, incandescent:
DS1	A	65R4151	6-8 volt; .20 ampere; single contact bayonet base; globe shaped bulb; type #51
			POST:
E1	B	HS-18	binding
E2			same as E1
			FUSE, cartridge:
F1	A	65K804910	glass; 1.0 ampere; 125 volt; 1-1/4" long x 1/4" dia.
			CONNECTOR, receptacle:
J1	A	9K857036	female; single contact; chassis mounted
			COIL, RF:
*L1	B	H-5744	choke; 50 uh
*L2			same as L1
*L3	B	H-1442	choke; 18 uh
*L4			same as L3
*L5			same as L3
*L6	B	H-5538	choke; 15 uh
*L7			same as L6
*L8	B	H-1441	choke; 14 uh
*L9	B	H-6166	choke; toroidal
*L10	B	H-6563	choke; 200 uh (in air)
*L11			same as L10
*L12	B	H-6109	choke; 150 uh
L13			NOT USED
*L14			same as L10
*L15			same as L10
*L16			same as L10
*L17			P/O attenuator assembly
*L18			P/O attenuator assembly
*L19	B	H-6169	25-32 mcs band
*L20	B	H-6171	32-41 mcs band
*L21	B	H-6173	41-54 mcs band
*L22	B	H-6176	140-175 mcs band
*L23			same as L10
*L24			same as L10

REFERENCE SYMBOL	LEGEND	MFG. PART NO.	DESCRIPTION
			METER:
M1	A	72K868398	0-50 micro-ampere
			CONNECTOR, plug:
P1	B		male; 2 conductor; a-c power
			RESISTOR, fixed: unless otherwise stated:
R1	A	6R6341	carbon; 22K ±10%; 1 w
R2	A	6K121896	carbon; 1.5K ±10%; 2 w
R3	A	18K857040	variable: wire-wound; 20 ohm
R4	A	6R5646	carbon; 390K ±10%; 1/2 w
R5	A	17K868399	wire-wound; 10K ±5%; 10 w
R6	A	6R6229	carbon; 1K ±10%; 1/2 w
R7	A	6K868400	film; 160K ±5%; 1 w
R8			same as R7
R9	A	18K868401	variable; wire-wound; 5K
R10	A	6R5727	carbon; 2.4K ±5%; 1/2 w
R11	A	6R6326	carbon, 100 ±10%; 1/2 w
R12	A	6R6377	carbon; 470K ±10%; 1/2 w
*R13	K	WC818	variable: wire-wound; 5K
*R14	K	WC818	variable: wire-wound; 2K
R15			NOT USED
*R16	K	WC818	variable: wire-wound; 1K
*R17			same as R14
*R18			same as R14
*R19			P/O switch assembly S3
*R20			same as R13
*R21	M	EB3645	carbon; 360K ±5%; 1/2 w
R22	A	17K868402	wire-wound; 30K ±5%; 10 w
R23	A	18K868403	variable: wire-wound; 100 ohm
*R24	M	EB5105	carbon; 51 ohm ±5%; 1/2 w
*R25	M	EB4731	carbon; 47K ±10%; 1/2 w
*R26	L	NR25	film; 100K ±1%; 1 w
*R27	L	NR25	film; 9K ±1%; 1 w
*R28	N	Type Q	variable; composition; 50K
*R29			same as R28
*R30	K	WCA	variable: wire-wound; 20K
*R31	A	6R6398	carbon; 150K ±10%; 1/2 w
*R32			P/O C29
*R33			P/O C30
*R34	B	H-4882-23	metal film; 63 ohm ±1%; 1/2 w
R35	A	6R2056	carbon; 24K ±5%; 1 w
*R36			200K ±5%; 1/2 w
*R37	N	Q	variable; composition; 250K
*R38	B		100K
*R39	A	6K119926	carbon; 2.7K ±10%; 1/2 w
R40	A	6K868405	carbon; 240K ±10%; 1/2 w
R41	A	6R5778	carbon; 2 megohm ±5%; 1/2 w
R42	A	6R6414	carbon; 270K ±10%; 1/2 w
R43			same as R31
R44	A	6K127632	carbon; 33K ±10%; 1/2 w
R45	A	6R490724	carbon; 43K ±5%; 1/2 w
R46	A	19K868406	variable: composition; 20K
R47			same as R45
*R48	M	EB3321	carbon; 3.3K ±10%; 1/2 w
*R49			same as R6
*R50	M	GB2221	carbon; 2.2K ±10%; 1 w
*R51			same as R50
R52	A	6R6046	carbon; 1 megohm ±10%; 1/2 w
*R53	A	6R5728	carbon; 7.5K ±5%; 1/2 w
*R54	M	EB	carbon; factory selected
*R55	M	EB	carbon; factory selected
*R56	M	EB	carbon; factory selected
*R57	M	EB	carbon; factory selected
*R58	M	EB	carbon; factory selected
*R59	L	NR25	film; 76.4K ±2%; 1 w
*R60	M	EB	carbon; factory selected
*R61	M	EB	carbon; factory selected
R62			same as R31
R63			same as R31
R64	A	19K868407	variable; composition; 1K
R65	A	6R6229	carbon; 1K ±10%; 1/2 w
*R66	M	EB	150K; 1/2 w

REFERENCE SYMBOL	LEGEND	MFG. PART NO.	DESCRIPTION
			RESISTOR, thermal:
RT1	A	65K868408	ballast lamp; type 6TF4
RT2	A	65K868409	ballast lamp; type 3S6
*RT3	B		
*RT4	B		
			SWITCH:
S1	A	40K857043	toggle; spst
*S2	B	H-6716	rotary; modulation
*S3	B		assembly; includes R19
*S4	B		toggle; type spst
			TRANSFORMER:
T1	A	25K868410	power;
			TUBE, electron:
V1	A	195T105A03	type 6X4
V2	A	195T192A01	type 5651
V3	A	195T101A03	type 6AQ5A
V4	A	195T113A02	type 12AT7
V5	A	195T274A01	type 12BH7A
V6	A	195T142A02	type 6AF4A
			CABLE; special purpose:
W1	A	30K857046	AC power; 2 conductor; includes P1

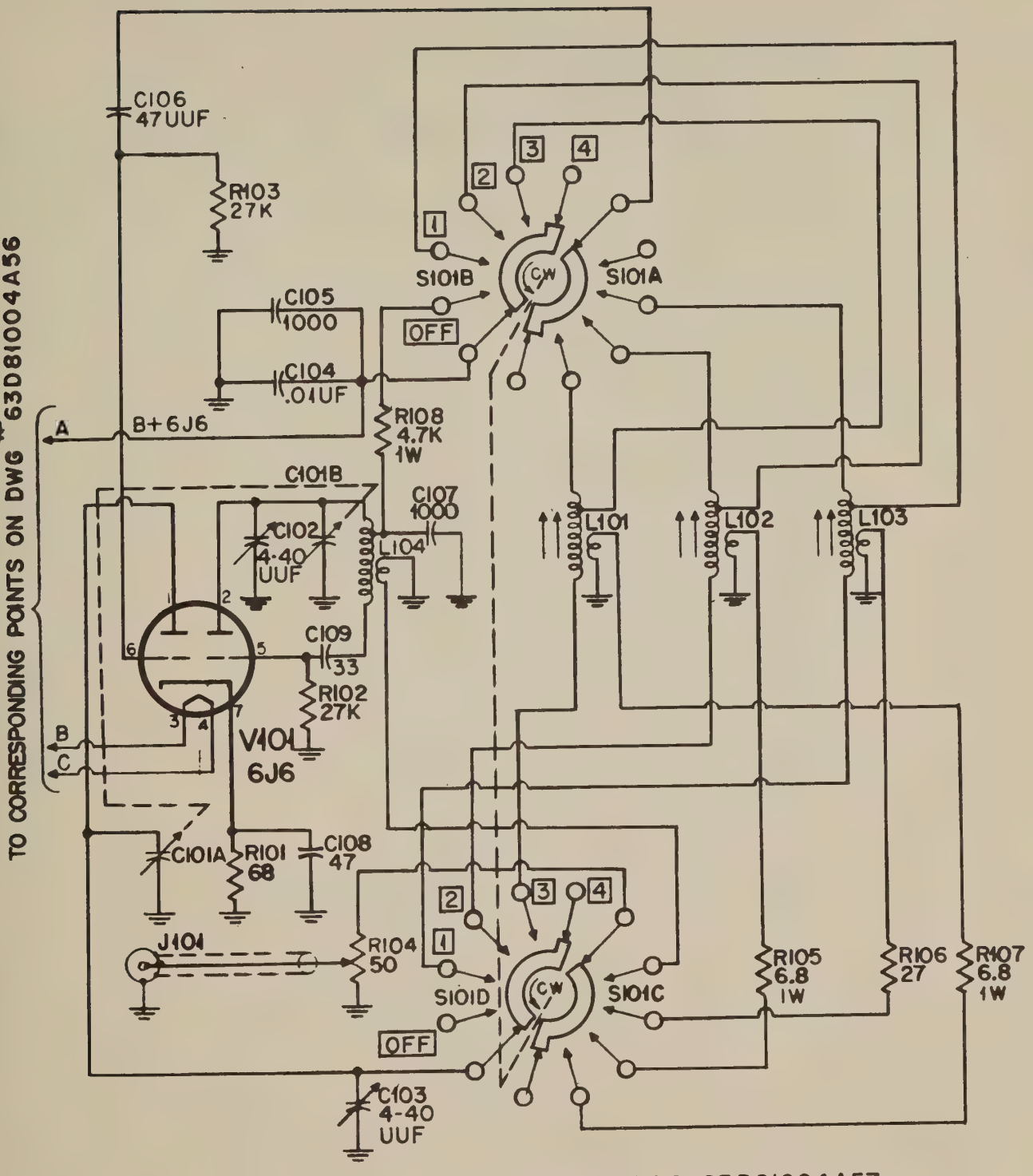


DIAGRAM NO. 63B81004A57

Model T1034B FM Signal Generator
IF Oscillator
Schematic Diagram
Motorola No. 63B81004A57-O
7/5/61-UM

PARTS LIST For Schematic Diagram 63B81004A57-O

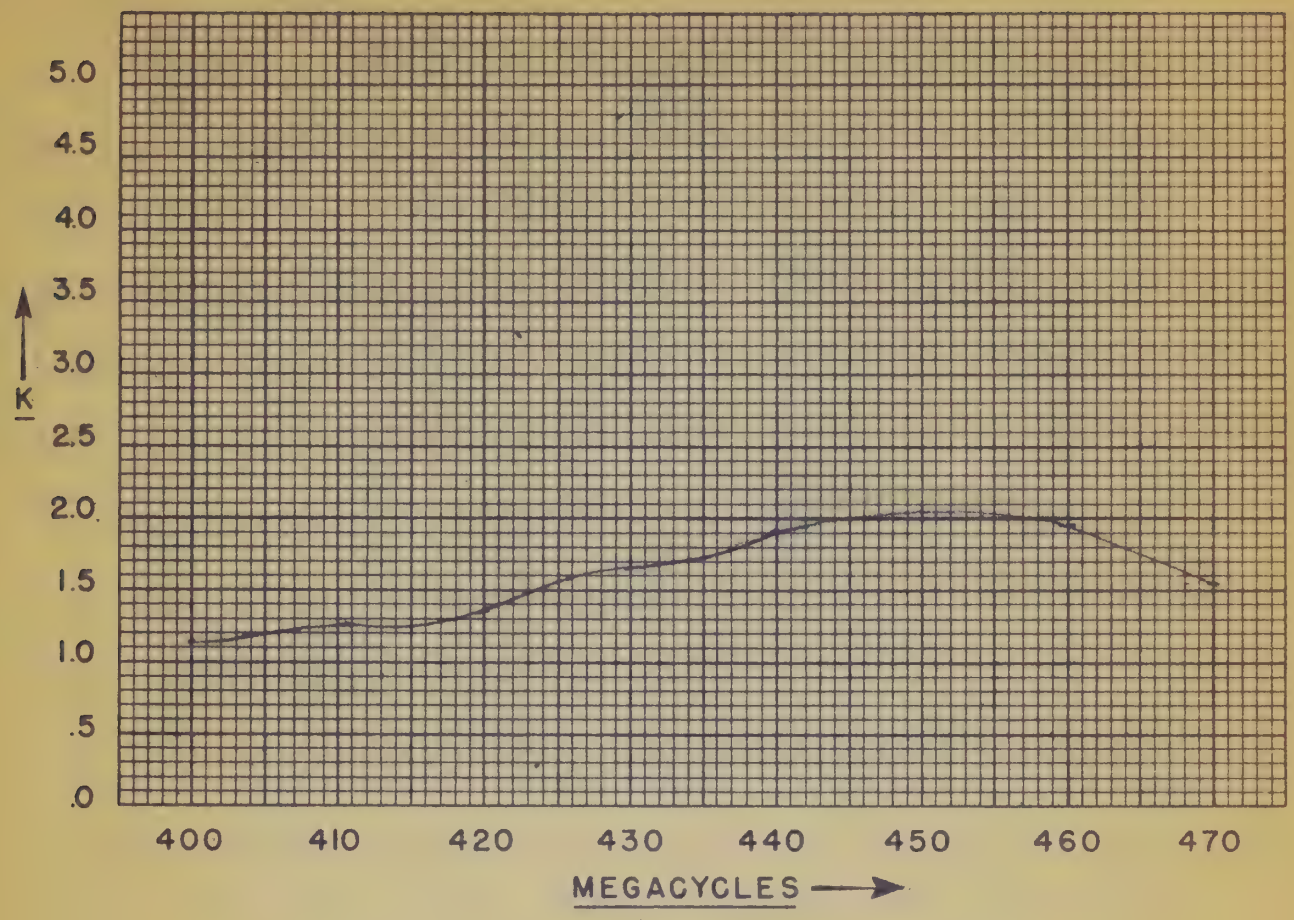
NOTE

Referenced items indicated by an asterisk (*) are not field replaceable. The equipment must be returned to Measurements Corporation for replacement of these items.

LEGEND

LEGEND SYMBOL	MANUFACTURER
A	Motorola Inc.
B	Measurements Corporation
C	Sprague
D	Erie Resistor Co.
E	Elmenco
F	Allen Bradley

REFERENCE SYMBOL	LEGEND	MFG. PART NO.	DESCRIPTION
			CAPACITOR; fixed: unless otherwise stated:
*C101	B	H-6717	variable; consists of C101A and C101B; includes C102 and C103
*C102	E	#422	variable; 4-40 uuf
*C103			same as C102
*C104	B		.01 uf
*C105	D	#327	ceramic; 1000 uuf
*C106	D	NPO338-47	ceramic; 47 uuf ±5%
*C107	C	507C2	ceramic; 1000 uuf
*C108			same as C106
*C109	D	NPOL-330	ceramic; 33 uuf ±5%
			COIL, RF:
*L101	B	H-6730	2.8-4.2 mcs band
*L102	B	H-6731	4.1-6.0 mcs band
*L103	B	H-6732	6.0-9.2 mcs band
*L104	B	H-6729	67-76 mcs band
			RESISTOR; fixed: unless otherwise stated
*R101	F	EB6801	carbon; 68 ohm ±10%; 1/2 w
*R102	F	EB2731	carbon; 27K ±10%; 1/2 w
*R103			same as R102
*R104	B	H-6745	variable; wire-wound; 50 ohms; non-inductive
*R105	F	GB	carbon; 6.8 ohm ±10%; 1 w
*R106	F	EB2701	carbon; 27 ohm ±10%; 1/2 w
*R107			same as R105
*R108	F	GB4721	carbon; 4.7K ±10%; 1 w
			SWITCH,
*S101	B	H-6574	rotary; i-f band
			TUBE,
V101	A	195T181A01	electron; type 6J6



E BAND DEVIATION CORRECTION CURVE

To obtain the True Deviation make the following correction:

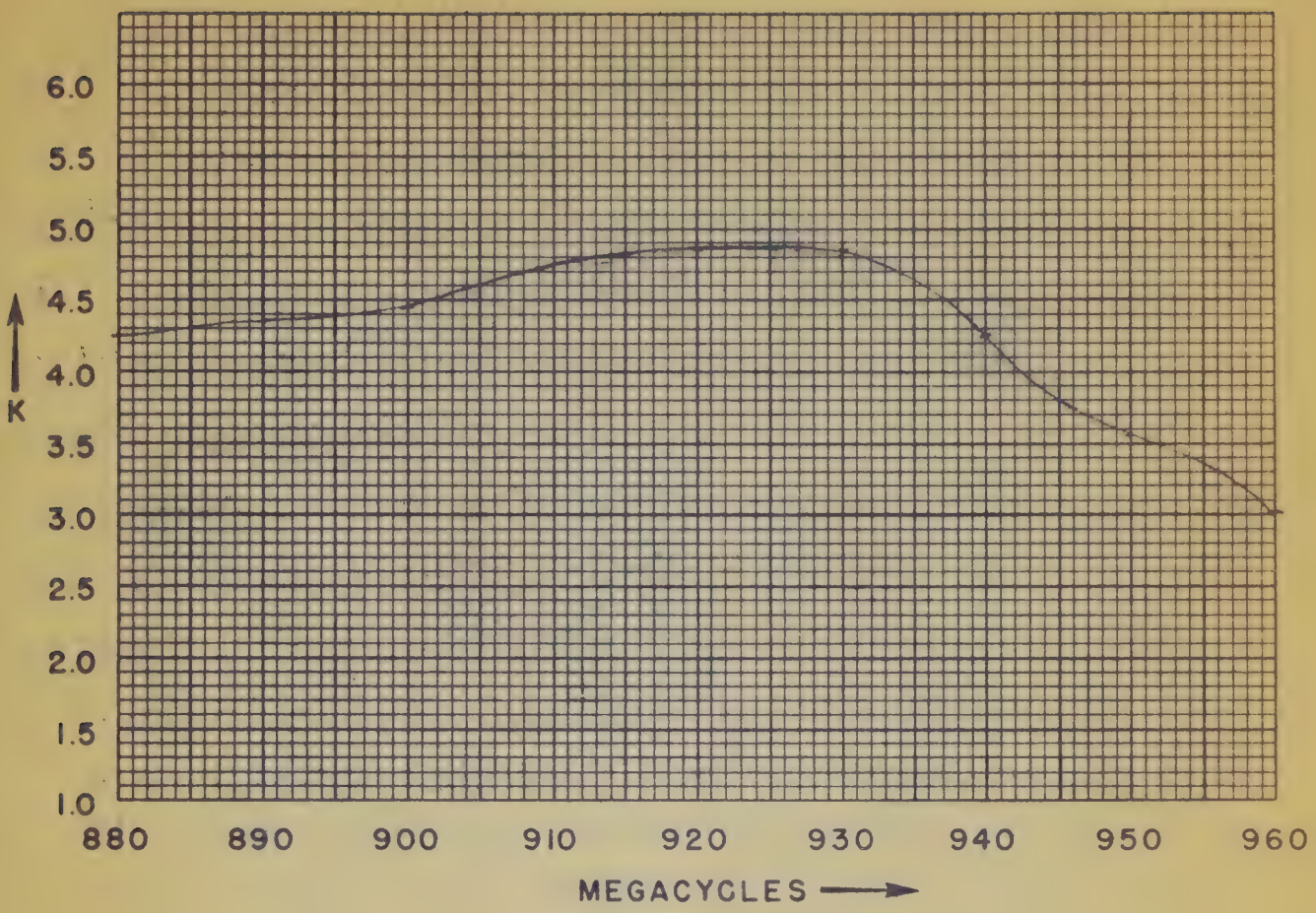
True Deviation in Kc = K x Meter Indication in Kc

To obtain a desired Frequency Deviation set meter KC DEVIATION in accordance with the following:

$$\text{Meter Indication in Kc} = \frac{\text{Desired Deviation in Kc}}{\text{K}}$$

MODEL NO. J-1034-B SERIAL NO. 1562

DATE 7-26-61



F BAND DEVIATION CORRECTION CURVE

To obtain the True Deviation make the following correction:

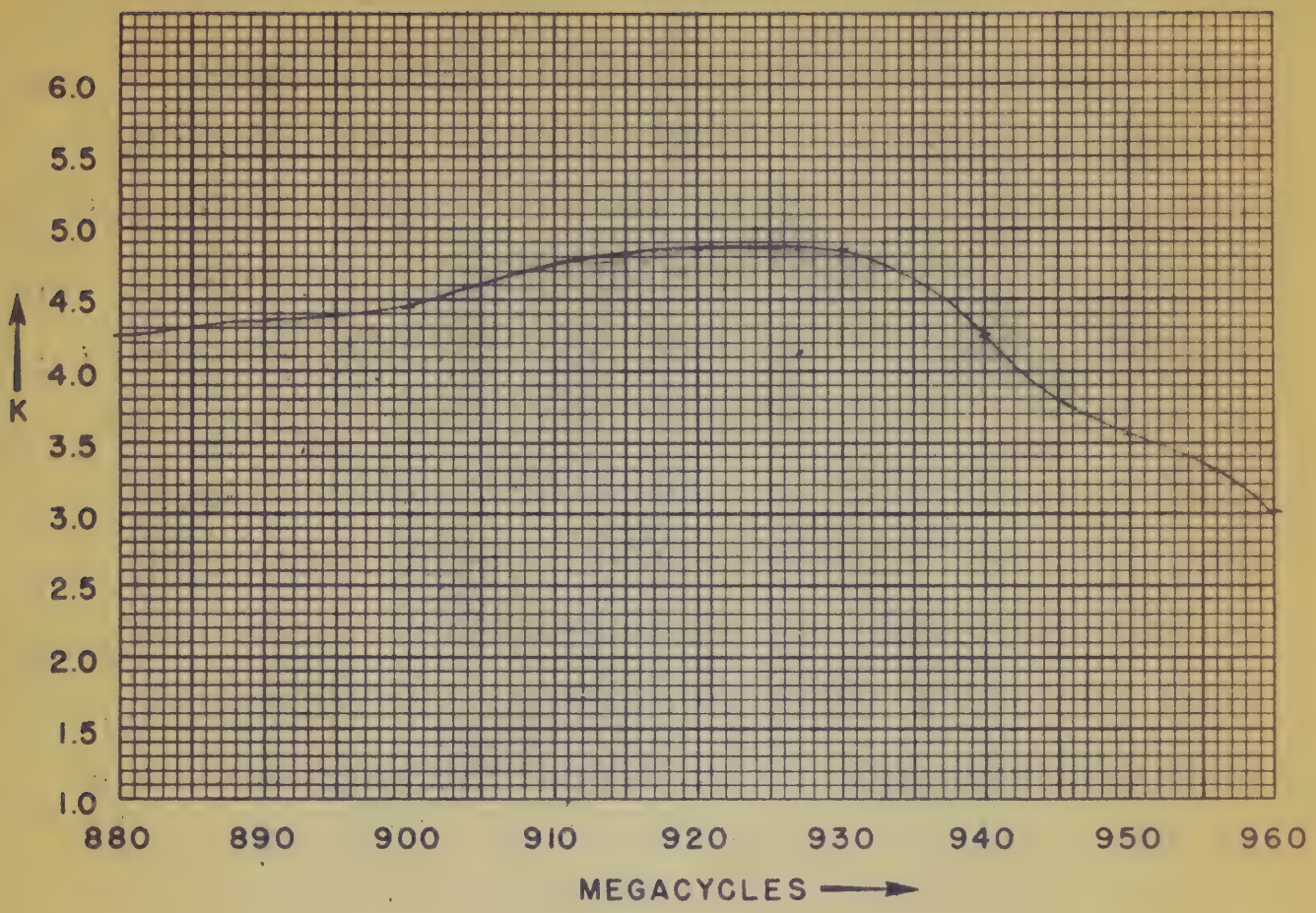
True Deviation in Kc = K x Meter Indication in Kc

To obtain a desired Frequency Deviation set meter KC DEVIATION in accordance with the following:

$$\text{Meter Indication in Kc} = \frac{\text{Desired Deviation in Kc}}{K}$$

MODEL NO. T-1034-B SERIAL NO. 1502

DATE 7-26-61



F BAND DEVIATION CORRECTION CURVE

To obtain the True Deviation make the following correction:

True Deviation in Kc = K x Meter Indication in Kc

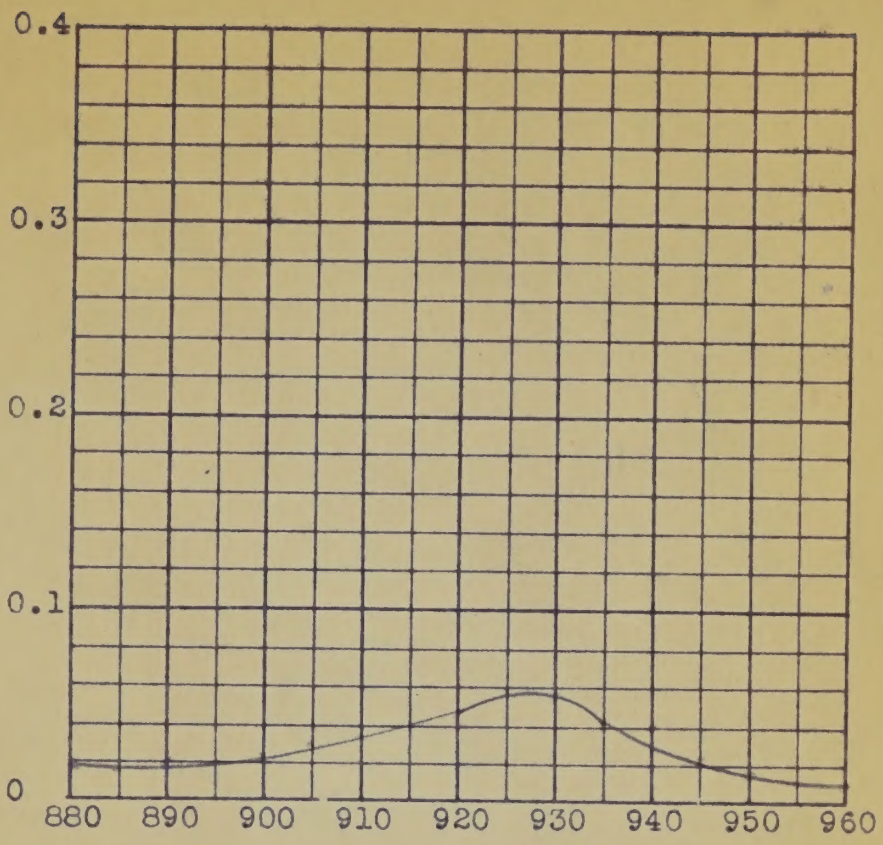
To obtain a desired Frequency Deviation set meter KC DEVIATION in accordance with the following:

$$\text{Meter Indication in Kc} = \frac{\text{Desired Deviation in Kc}}{\text{K}}$$

MODEL NO. T-1034-B SERIAL NO. 1502

DATE 7-26-61

FOR TRUE OUTPUT MULTIPLY
ATTENUATOR READING BY



OUTPUT FREQUENCY IN MEGACYCLES.

SECOND HARMONIC
OUTPUT CALIBRATION CHART
FOR 890 to 960 MC BAND

MODEL T-1034-B

SERIAL 1502 DATE 7/26/61